wherein the optical path includes a first section of optical fiber with normal dispersion and a second section of optical fiber with anomalous dispersion.

8. An optical communication system for transmitting solitons, comprising a multiplicity of fiber lengths of opposite sign dispersion concatenated together, for management of dispersion,

the fiber lengths being formed as a multiplicity of unit cells, each unit cell comprising two adjacent fibers of opposite sign dispersion, wherein each unit cell is short in relation to the length of the dispersion management system.

9. A system according to claim 8, wherein the path average dispersion of the multiplicity of unit cells is anomalous.

10. An optical communication system according to Claim 8, wherein the dispersion magnitude of adjacent fiber lengths of a unit cell are both far from zero in relation to the average dispersion for the unit cell which is close to zero, in order to permit propagation of soliton pulses wherein the shape of the soliton alternately expands and compresses as it propagates through a unit cell.

11. An optical communication system according to Claim 8, wherein the pulse profile of a soliton at the beginning of a unit cell is Gaussian in shape.

12. An optical communication system according to Claim 8, wherein the unit cell is defined to start along the length of a fiber section between its ends, and to end along the length of a fiber section, between its ends.

13. An optical communication system according to Claim 8, arranged such that a pulse is launched into the multiplicity of unit cells with a Gaussian shape.

14. An optical communication system according to claim 10, wherein the unit cell is defined to start along the length of the fiber section between its ends, and to end along the length of the fiber section between its ends, and a pulse is launched into a unit cell of the dispersion management system with a Gaussian shape.

15. An optical communication system for transmitting soliton or soliton-like pulses, comprising:

a transmitter;

a receiver; and

an optical path between the transmitter and the receiver,

wherein the soliton or soliton-like pulses alternately compress and disperse as they propagate along the optical path.

16. An optical communication system for transmitting solitons, comprising a multiplicity of fiber lengths of opposite sign dispersion concatenated together for management of dispersion,

the fiber lengths being formed as a multiplicity of unit cells, each unit cell comprising two adjacent fibers of opposite sign dispersion, wherein each unit cell is short in relation to the length of the system; and

wherein the dispersion magnitude of adjacent fiber lengths of a unit cell are both far from zero in relation to the average dispersion of the unit cell which is close to zero, in order to permit the propagation of pulses through the unit cells which alternately compress and expand in shape as they propagate through the unit cell.

17. An optical communication system according to claim 16 arranged such that the pulse is launched into the multiplicity of unit cells with a predetermined shape, which shape is repeated during propagation, at a point in each unit cell.

18. An optical communication system according to Claim 16, wherein the pulse profile of a soliton at the beginning of a unit cell is Gaussian in shape.

19. An optical communication system according to Claim 16, wherein the unit cell is defined to start along the length of a fiber section between its

ends, and to end along the length of a fiber section, between its ends.

20. An optical communication system according to Claim 16, arranged such that a pulse is launched into the multiplicity of unit cells with a Gaussian shape.

21. An optical communication system for transmitting soliton or soliton-like pulses along an optical path, comprising:

a dispersion management system, the dispersion management system causing the soliton or soliton-like pulses to alternately compress and disperse as they propagate along the optical path.

22. A method of transmitting soliton or soliton-like pulses, the method comprising:

launching a stable soliton or soliton-like pulse having a predetermined energy into a dispersion management system, the predetermined energy being greater than that for launching a soliton or soliton-like pulse in an equivalent uniform system with equal path average dispersion.

23. A method according to claim 22, comprising providing a dispersion management system being formed as a multiplicity of unit cells, each unit cell comprising two adjacent fibers of opposite sign dispersion,

and defining the unit cell to start along the length of a fiber section between its ends, and to end along the length of a fiber section, between its ends.

24. A method according to claim 23, including defining the unit cell to start midway along the length of a fiber section and to end mid-way along the length of a fiber section.

25. A method according to claim 23, comprising launching a soliton into the fiber, so that the soliton at the beginning of a unit cell is Gaussian in shape, the shape of the soliton alternatively expanding and compressing as it propagates through a unit cell.

26. A method according to claim 22, including launching the pulse into the fiber with a predetermined shape

27. A method according to claim 25, including launching the pulse into the fiber with a Gaussian shape.

28. A method according to claim 23, comprising propagating a soliton through the dispersion management system with the pulse profile of the soliton at the beginning of each unit cell being the same, and the shape of the soliton alternately expanding and compressing as it propagates through each unit cell.

29. A method of transmitting solitons in an optical communication system, the system comprising a multiplicity of fiber lengths of opposite sign dispersion concatenated together in order to provide a relatively high local dispersion at any given point, but a relatively low path-average dispersion,

the fiber lengths being formed as a multiplicity of unit cells, each unit cell comprising two adjacent fibers of opposite sign dispersion,

the method comprising launching a soliton pulse into the dispersion management system with a predetermined energy, the predetermined energy being greater than that for launching a pulse in an equivalent uniform system with equal path average dispersion,

and transmitting the pulse through the dispersion management system with the pulse profile having the same at the start of each unit cell, whilst alternately compressing and expanding as the pulse progresses through a unit cell.

30. A method according to claim 29, wherein the peak power of the pulse within a unit cell is lower than the initial launch power.

31. A method according to claim 30, ~~including~~ launching the pulse into the system with a Gaussian shape.

32. A method according to claim 29, including launching a pulse into the system with a predetermined form, and the pulse profile is repeated at a point within each unit cell.

33. A method of transmitting soliton or soliton-like pulses in an optional communication system, the method comprising:

launching a stable soliton or soliton-like pulse having a predetermined energy into the system with a predetermined form, which is repeated at intervals during propagation point while this pulse shape alternately expands and progresses as it propagates through the system.

34. An optical communication system according to claim 33, wherein the predetermined form is Gaussian.

35. An optical communication system for transmitting soliton or soliton-like pulses, comprising:

a dispersion management system having a path average dispersion that is anomalous.